WHAT IS CLAIMED IS:

1. A node search method for searching for a service node for providing a service to a mobile node, in a mobile communication system including a plurality of service nodes and the mobile node, each of the service nodes and the mobile node having a node storage unit configured to store addresses of service nodes, the node search method comprising:

transmitting a node search packet for searching for the service node from a search node, which searches for the service node, to an address stored in the node storage unit of the search node,

returning a node notice packet from at least one of a search packet reception node, which has received the node search packet, and a peripheral node other than the search packet reception node, to the search node in response to the node search packet,

detecting the service node on a basis of a returned node notice packet by the search node, and

updating the node storage unit of the search node on a basis of a detected service node by the search node.

2. A node comprising:

a node storage unit configured to store addresses of service nodes for providing a service to a mobile node;

a search packet creation unit configured to create a node search packet to be transmitted to an address stored in the node storage unit, in order to search for the service node;

a communication unit configured to communicate, transmit the node search packet created by the search packet creation unit, and receive a node notice packet returned from at least one of a search packet reception node, which has received the node search packet, and a peripheral node other than the search packet reception node in response to a transmitted node search packet;

a detection unit configured to detect the service node on a basis of the node notice packet received by the communication

unit; and

an update unit configured to update the node storage unit on a basis of the service node detected by the detection unit.

3. The node of claim 2, further comprising:

a data creation unit configured to create data for investigating node information concerning the service node detected by the detection unit, the data being transmitted to a detected service node, wherein

the data storage unit stores the node information,

the communication unit transmits the data created by the data creation unit, and receives response data returned in response to the data by the detected service node, and

the update unit updates the node storage unit on a basis of a returned response data.

4. The node of claim 2, wherein

node information concerning the service node is included in the node notice packet,

the node storage unit stores the node information, and

the update unit updates the node storage unit on a basis of a returned node notice packet.

5. The node of claim 3 or 4, wherein the node storage unit stores the addresses of the service nodes and the node information according to a predetermined criterion.

6. The node of claim 4, further comprising:

a determination unit configured to determine inter-node information between the node and the peripheral node according to inter-node information between the node and the search packet reception node and inter-node information between the search packet reception node and the peripheral node on a basis of the node notice packet, wherein

the update unit updates the node storage unit on a basis

of the inter-node information between the node and the peripheral node determined by the determination unit.

7. The node of claim 2, further comprising:

a notice packet creation unit configured to create the node notice packet by accessing the node storage unit, wherein

the communication unit transmits the node notice packet created by the notice packet creation unit.

8. The node of claim 7, wherein the notice packet creation unit creates the node notice packet that is passed through the peripheral node.

9. The node of claim 7, wherein the notice packet creation unit creates the node notice packet when the communication unit has received at least one of the node search packet, the node notice packet, and a node notice request packet for requesting return of the node notice packet.

10. The node of claim 2, further comprising:

a request packet creation unit configured to create a node notice request packet for requesting the peripheral node to return the node notice packet, wherein

the communication unit transmits the node notice request packet created by the request packet creation unit.

11. The node of claim 10, wherein the request packet creation unit creates the node notice request packet when the communication unit has received at least one of the node search packet, the node notice packet, and the node notice request packet.

12. The node of claim 2, further comprising:

a request packet creation unit configured to create a node registration request packet for requesting registration in a node storage unit of another service node, wherein

the communication unit transmits the node registration request packet created by the request packet creation unit.

13. The node of claim 2, wherein

the communication unit receives a node registration request packet for requesting registration in a node storage unit of another service node, and

the update unit updates the node storage unit on a basis of the node registration request packet.

14. The node of claim 2, further comprising:

a selection criterion holding unit configured to hold a selection criterion for selecting a service node to be used; and

a selection unit configured to access the node storage unit and select the service node to be used, on a basis of the selection criterion held in the selection criterion holding unit.

15. A mobile communication system comprising:

a search node configured to search for a service node for providing a service to a mobile node by transmitting a node search packet in order to search for the service node;

a search packet reception node configured to receive the node search packet transmitted from the search node; and

a peripheral node other than the search packet reception node,

wherein

the search node comprises:

a node storage unit configured to store addresses of service nodes;

a search packet creation unit configured to create a node search packet to be transmitted to an address stored in the node storage unit;

a communication unit configured to communicate, transmit the node search packet created by the search packet creation unit, and receive a node notice packet returned from at least one of

the search packet reception node and the peripheral node in response to a transmitted node search packet;

a detection unit configured to detect the service node on a basis of the node notice packet received by the communication unit; and

an update unit configured to update the node storage unit on a basis of the service node detected by the detection unit.

16. A computer program product for causing a computer to function as a node, the computer program product comprising:

a first computer program code for causing the computer to store addresses of service nodes for providing a service to a mobile node;

a second computer program code for causing the computer to create a node search packet to be transmitted to a stored address, in order to search for the service node;

a third computer program code for causing the computer to communicate, transmit the node search packet created, and receive a node notice packet returned from at least one of a search packet reception node, which has received the node search packet, and a peripheral node other than the search packet reception node in response to a transmitted node search packet;

a fourth computer program code for causing the computer to detect the service node on a basis of the node notice packet received; and

a fifth computer program code for causing the computer to update the addresses on a basis of a detected service node.